Exhibit 4 ACOUSTICAL REPORT



September 19, 2011

Ms. Vivian Rey JVP Engineers, P.C. 5101 Wisconsin Ave, NW Suite 400 Washington DC 20016

Re: Office of Cable Television Relocation to 1899 9th Street, NE Acoustical Privacy

Ms. Rey:

Hush Acoustics LLC has completed an acoustical review for the Office of Cable Television Relocation project in Washington, D.C. This report addresses acoustical privacy. A prior report addressed room acoustics, and subsequent reports will address site noise and background sound levels from MEP systems.

A site visit was performed on September 16, 2011, and sound transmission tests were performed between various rooms. In general, the walls are excellent, the door layout is excellent, but the doors themselves are in bad shape. Many steel doors are bent so much they won't close, and most wood doors are cracked. Most acoustical door seals are also in bad shape.

Summary of Tests Performed and Observations

From EMG power to large studio A the measured rating was Noise Isolation Class (NIC) 55. The NIC rating is essentially a field version of the more familiar Sound Transmission Class (STC) rating, but the NIC rating is not adjusted to account for the size of the wall or the amount of sound absorbing materials present as is the STC rating. This test was not a true test of the wall, since so much of the sound was leaking through the corridor to the large studio A double doors. During this test we noted that there is a large duct passing over the ceiling of EMG power to the studio which penetrates the concrete block wall of the studio (see Figure 1).



Figure 1. Photo of Duct over EMG Power



From the existing room which is partially where Telecom is and partially where UPS is to large studio A the rating was NIC 71 – this shows good noise isolation. From UPS to large studio A the rating was NIC 68 which also shows good noise isolation. In each of these cases, some sound was still leaking through the corridor and the doors.

From electrical 044 to large studio A the rating was only NIC 58, and from electrical 043 to large studio A the rating was only NIC 52. Likewise, from electrical 044 to small studio B the rating was only NIC 55, and from electrical 043 to small studio the rating was only NIC 48. In each of these cases there was significant sound leaking through wall penetrations. We could see one such hole roughly 10 feet above the floor (see the top of Figure 2), and we could hear leaks roughly 10 and 20 feet above the floor in each case.

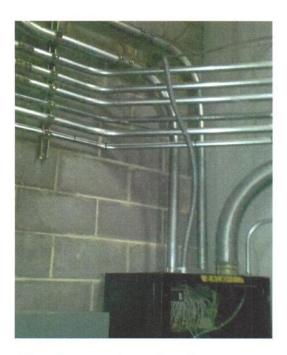


Figure 2. Photo of One Representative Wall Penetration in Electrical Room

From Women 013 to small studio B the rating was NIC 73 if one of the paired studio doors was open and NIC 81 with all doors closed. This is an outstanding rating (the highest we have ever measured). This test shows how important doors are since sound can flank such a long distance down the corridor.

From Audio B to small studio B the rating was only NIC 58. Likewise from Audio A to large studio A the rating was only NIC 54. In each case, there is a significant leak at the raised floor / walker duct under the wall (see Figures 3 and 4).

From Audio B to large studio A the rating was NIC 78. Likewise, from Control B to large studio A the rating was NIC 73. These ratings are good and might improve if the raised floor leaks discussed in the paragraph above are improved.





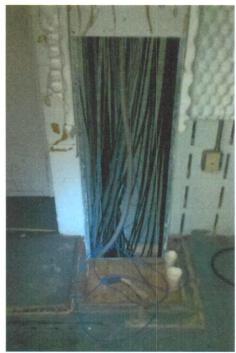


Figure 3. Raised Floor into Small Studio B

Figure 4. Raised Floor into Small Studio A

From Audio B to control B the rating was NIC 63. This shows that there is currently good privacy between these rooms. However, this rating might worsen as the built-up walls in the audio room are cut back.

From Audio B to the corridor the rating was NIC 28. This is roughly what we would have expected for a sealed wood door. The door needs to be replaced since it is cracked. A new door with new seals should perform slightly better acoustically.

From Audio B to tape the rating was NIC 57. This is fairly good. We noted there are slab-to-slab walls along the corridor at Audio A/B and Control A/B, and in at least one location we saw a sound-lined return air transfer duct. Therefore, the sound from Audio B to tape is likely going through the doors; the performance will be better once the doors are replaced.

Recommendations

We recommend the following:

- 1. Walls
 - Between Audio B and Control B, as well as between Audio A and Control A, where the built-up wall will be minimized, the walls are likely fine. We might do some more investigation the next time we are on site. But for now, no improvements to these walls are proposed.
 - o For both walls of Mechanical 052, all new walls of Master Control 027, all 3 walls of Storage 049, all 3 walls of EMG Power 048, and both new walls of UPS 045 use 3-5/8"



- metal studs with 3-1/2" batt insulation between them and two full-height layers of 5/8" type X gypsum board on each side. If any new studs must be heavier than 25-gage, use resilient channels between the studs and base layer of gypsum board on one side of the wall.
- For all walls of conference 033, conference A 109, conference B 110, executive conference 112, and executive office 113, use 3-5/8" metal studs with 3-1/2" batt insulation between them and full-height 5/8" type X gypsum board on each side. If any new studs must be heavier than 25-gage, use resilient channels spaced 24" on center between the studs and base layer of gypsum board on one side of the wall (or add a second layer of gypsum board on each side of the wall in lieu of the channels).
- If some acoustical privacy is desired for the 8 Edit suites or for any private office use 3-5/8" metal studs with 3-1/2" batt insulation between them and full-height 5/8" type X gypsum board on each side.

2. Wall penetrations

- o From EMG power to large studio A we recommend packing back insulation between the duct and the concrete block to better seal it.
- o From electrical 043 and 044 to each of the studios we recommend sealing all wall penetrations on both the electrical room side and the studio A/B sides to be air tight. Use acoustical sealant for gaps up to 3/8" wide, and tightly pack fiberglass batt insulation into the gap if it is 1/2" or more wide.
- o From Audio B to small studio B and from Audio A to large studio A at the raised floor / walker ducts, sound is leaking to/from the two studios. We noticed that the built-out areas shown in Figures 3 and 4 do not show up on the architectural floor plan. We recommend adding an additional layer of 5/8" gypsum board to the three sides of these built-out areas shown in Figures 3 and 4 for the full height. In addition, use neoprene gaskets such as Pemko S88 on all four sides for the removable plywood access panels on each end, and pack at least 3 feet of batt insulation into the wall and floor on each end of these paths.
- O There is a large area with a raised floor, with four locations where there are raised floors / walker ducts heading to control rooms A/B and studios A/B. We recommend packing batt insulation into these four raised floor areas for a 3-foot long stretches at each end of each of these areas.
- o For all walls of rooms discussed in this report (new and existing to remain), apply acoustical sealant between the bottom of the gypsum board (or the bottom of the CMU) and the floor slab on each side of the wall, as well as between the top of gypsum board and the structure above on each side of the wall. Pack fiberglass batt insulation between the top of CMU and the structure above.
- O It is not completely clear from the drawings if there are locations where there are exposed concrete-enclosed columns. Some conceivable locations this could occur are the walls between rooms 136/137, 137/138, 138/139, 139/140, 033/035, 111/112, 118/128, 124/125, etc. If there is ever a case where gypsum board ends at exposed concrete, seal that joint with acoustical sealant.
- O Where curtain wall frames or window frames meet gypsum board walls or enclosed columns separating rooms, it is critical that this joint be well-sealed. Rubber gaskets simply do not work well. Some examples of where this occurs are rooms 136/137,



137/138, 138/139, and 111/112. We recommend that all such joints receive acoustical sealant on each side of the wall between the gypsum board and window/curtain wall frame. In some cases it will be necessary to apply the acoustical sealant with a finger since the caulk tube might not reach.

3. Windows

- There currently is a window between Audio A and Control A, as well as one between Audio B and Control B. The new work drawings do not indicate these windows, so they will presumably be removed. Our tests showed that acoustical privacy is currently fine here, so the windows could remain if desired. If any new interior windows are to be added here use ones similar to the existing ones.
- o In master control 027 there will be floor-to-ceiling windows at the corridor. We recommend either using IAC STC 47 double glazed Noise Lock windows, or using a stick-built simpler version consisting of two panes of 1/4" tempered glass separated by 4" airspace using either a storefront frame or a wood frame. Also extend the wall from the top of the windows to the structure above and use either rubber/neoprene seals or silicone sealant at all joints.
- o In Conference A 109 there are also full-height windows at the corridor. We recommend using 3/8" minimum glass. Also extend the wall from the top of the windows to the structure above and use either rubber seals or sealant at all joints.
- o In Exec Conf 112 and typical private offices there are full-height windows at the corridor. If acoustical privacy is desired, use thick glass here as well.

4. Doors

- O The drawings show that the tandem single doors connecting studios A and B will be reused. These doors are in bad shape (they don't swing freely) and should likely be replaced with similar new doors. These are listed as being made by Industrial Acoustics Company (IAC). That company is still around and doing well. One good product would be the IAC Noise Lock STC 47 door which weighs 11 psf and has a single row of magnetic seals.
- o The drawings show new doors for Control A/B and Audio A/B. This is good since the doors are all damaged. Use new wood doors with acoustical seals as described below.
- o For Corridor 006 and 009 the drawing shows new doors for both the wood outer and steel inner doors. However, at our recent meeting, Sean Lewis discussed keeping some of these doors. Based on our inspection on site the wood outer doors are probably fine while the two inner steel doors should be replaced with new IAC Noise Lock STC 47 steel doors. We recommend replacing all of the wood door seals as described below.
- o Provide door seals for Storage 011 as described below to maintain the integrity of the corridor 009 wall.
- Use acoustical seals for all doors of Linear Edit 026 and Master Control 027 as described below to limit noise intrusion from neighboring spaces.
- The drawings show that the two sets of double doors into small studio B will be reused. This likely is fine acoustically. We recommend replacing all of the seals to these doors with new IAC seals.
- The drawings show the inner pair of double doors to large studio A will be reused, while the outer pair of double doors will be removed. The outer doors are in very bad shape and cannot be reused, so that is probably why the drawings do not show them. The



inner doors are a bit dented but could likely be repaired. We recommend replacing the seals with new IAC seals (and repairing dents) for the inner set of double doors, and replacing the outer pair of doors with new doors such as IAC Noise Lock STC 47, to minimize noise from the loading dock (open area 051), trains, and the mechanical room from reaching the studio.

- O The drawings show the single door from large studio A to storage 049 will be reused. This is fine. We recommend replacing the seals to this door with new IAC seals, and using solid-core wood doors with acoustical seals as described below for the double doors from storage 049 to the loading dock (open area 051).
- We recommend using acoustical seals as described below for doors to noisy rooms which includes Elev. Closet 001 (houses elevator pump), mechanical 052 (houses 3 boilers and 2 pumps), EMG Power 048 (houses a transformer and small fan-coil unit), UPS 045 (houses a transformer and a small fan-coil unit), Electrical 044 (houses transformers), Mechanical 042 (houses a transformer), Linear Edit 025 (houses a CRAC unit above the ceiling and many racks), and Tech Core 024 for all 3 doors (houses 2 CRAC units and many racks).
- o If there will be confidential conversations in Conference 033, Conference A 109, Conference B 110, Exec Conf 112, or Exec Office 113, use acoustical seals as described below but with only 1-3/4" thick doors.
- o If some acoustical privacy is desired for the 8 Edit suites, use acoustical seals as described below but with only 1-3/4" thick doors.
- O There is a louvered door to Telecom 047 which the drawings show is to be replaced. If there are other locations in rooms discussed above where there are louvered doors (we didn't check which were louvered yet), be sure to replace those doors as well.

In this report wherever we recommend replacing seals for metal IAC doors, we recommend obtaining head, jamb, bottom, and astragal seals from IAC. Wherever we recommend providing seals for wood doors we recommend using the following models (or equal by Pemko or National Guard Products):

- Where door leafs are to be replaced or new, use minimum 2-1/4" thick particle core wood. Do not allow recessed panels any panels chosen for aesthetics must be surface-applied.
- If there is glass in the doors use 3/8" (minimum) laminated glass.
- Either use cam-lift hinges, or provide an automatic door closer.
- If an automatic door closer is used, mount the head seal before mounting the closer, and then be sure to mount the door closer such that it does not interfere with the head seal.
- Use adjustable compressible neoprene bulb seals at the head and jambs (e.g., Zero International #770).
- Use a ½" high (ADA-compliant) threshold with a compressible neoprene bumper seal (e.g., Zero #564).
- For single doors use a fully-mortised automatic door bottom seal (e.g., Zero International #364A).
- For double doors use a fully-mortised automatic door bottom seal (e.g., Zero International #362).
- For double steel doors use a magnetic meeting stile astragal seal (e.g., Zero International #40).
- For double wood doors use a neoprene meeting stile astragal seal (e.g., Zero International #383).



- For wood doors apply clear silicone sealant on each side of the head stop and jamb stops where they meet the door frame.
- Include a requirement in the specifications for a light test. A light test is a thorough process of adjustment of acoustical seals in which the installer turns the lights on for the room into which the door swings, and turns the lights off for the adjoining room. As the installer closes the door he or she looks for light leaking between the seals and door, or between the seals and door frame, along all four edges of the door. This test requires removal of eyeglasses to get the eye immediately flush with the door. If the slightest light can be seen the seals must be adjusted. This process is almost never thoroughly completed in practice due to lack of patience but should be referenced in the specifications.
- Note that we are providing recommendations to the designer regarding which products to use
 with respect to acoustical performance, and are not specifying the products or performing a
 detailed review of compatibility.

If you have any questions, please contact me at 703/534.2790 or Gary@HushAcoustics.com.

Sincerely,

Gary Ehrlich, P.E.

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Principal



September 19, 2011

Ms. Vivian Rey JVP Engineers, P.C. 5101 Wisconsin Ave, NW Suite 400 Washington DC 20016

Re: Office of Cable Television Relocation to 1899 9th Street, NE Acoustical Review

Ms. Rey:

Hush Acoustics LLC has completed an acoustical review for the Office of Cable Television Relocation project in Washington, D.C.

Acoustical issues are divided into four components: room acoustics, acoustical privacy, site noise, background sound levels from MEP systems. In order to provide information in the most-timely manner possible, this report addresses only room acoustics and the remaining topics will be addressed in subsequent reports.

Aside from the two production studios, there will be no production microphones in any other locations. As such, we have focused our review of room acoustics mostly on the two production studios. The existing studio room finishes are as follows:

- Sealed concrete floors
- Black panels on the roof we assumed these were 2" thick semi-rigid fiberglass stick-clipped to the roof structure
- Painted slotted SoundBlox concrete block with acoustic inserts on most walls. In the large studio there are also some areas with un-slotted painted concrete block, one large curtain, and an area approximately 15-foot tall 60-foot long painted blue gypsum board area over studs.
- Steel doors
- Exposed steel ducts
- We understand all finishes which are in good condition will be reused.

The reverberation time is the amount of time it takes a loud sound to fade after it ends and become inaudible. The reverberation time is typically measured or predicted in various frequency bands either one octave wide or one-third of an octave wide. We measured reverberation times in one-third octave bands at various locations in each studio and the averages are presented in Figure 1.

In spaces where music is a key component such as musical performance spaces and music recording studios, a moderate amount of reverberation is good. Likewise, a moderate amount of reverberation is good in large rooms in which people speak often without microphones and need to be heard in the back of the rooms. But for television studios an especially short reverberation time is appropriate, since the reverberation can always be added electronically. For studios of the size of Studio A (153,000 cf) and Studio B (38,000 cf), reasonable design goals are reverberation times of approximately 0.7 and 0.5



seconds, respectively (these were taken from the Master Handbook of Acoustics). These goals are most important at frequencies of 250 Hz and higher – slightly longer times are fine at lower frequencies since speech sound is less significant at those frequencies. It can be seen from Figure 1 that the reverberation times in the large Studio A are far above the goal of 0.7 seconds at frequencies of 250 to 3150 Hz, and the times in the small Studio B are far above the goal of 0.5 seconds at frequencies of 315 to 8000 Hz.

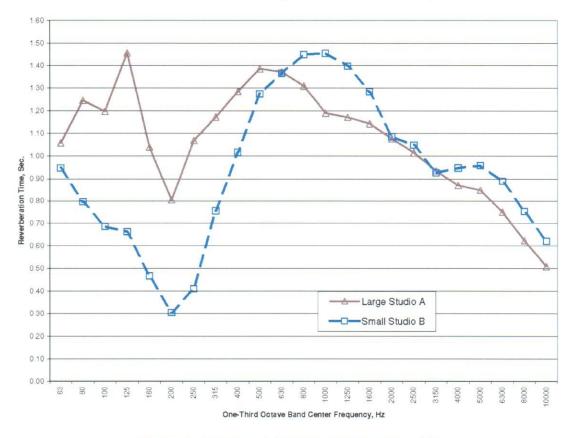


Figure 1. Measured Average Reverberation Times

In order to reduce reverberation times we recommend changing some room finishes. In order to predict the effects of changes to the finishes, we modeled the acoustics of the studios in a computer spreadsheet which predicts reverberation times as a function of the areas and assumed octave band sound absorption coefficients of all of the room finish materials. In setting up this spreadsheet it is necessary to tweak the assumed sound absorption coefficients (relative to those claimed by the product manufacturers or published in various locations) in order to get the output of the spreadsheet to exactly match the measured reverberation times. After an initial pass at setting up the spreadsheet the predicted reverberation times were 3 to 28% off in each frequency band in the large studio and 7 to 60% off in the small studio. In order to compensate, it was necessary to make relatively significant changes to the assumed finish acoustical properties. We believe the finishes are not performing as well as they should (or once did). We assumed that the slotted SoundBlox is performing far worse than we originally thought at high frequencies, the roof insulation is performing somewhat worse than we originally



thought, and the Sonex is performing as expected. Once the spreadsheet was reasonably accurate, we began considering alternate materials.

In evaluating alternate materials, we made the following assumptions and have the following recommendations:

- 1. We assumed that the roof insulation panels are in relatively good condition, and that any which are not in good condition (e.g., water damaged or have missing pieces) would be replaced with an equivalent material. A reasonable material which is likely equivalent is 2" thick Owens Corning SelectSound Black Acoustic Board. If it turns out that the existing panels are thicker or thinner than this, match the thickness of the existing panels. If the exact make/model of the existing panels is still available, purchase those for any which are replaced.
- 2. Since the Sonex panels are so spotty in coverage (see Figure 2), and it is not acceptable acoustically to paint them, we assumed that they would be removed entirely.
- 3. New 2" thick fabric-faced fiberglass panels would be added with an area as needed to reach the desired reverberation times. We predict that this would be achieved if the new acoustical panels are used on all four walls in a 24-foot tall band (i.e., approximately 6700 sf) for the large studio A and in a 15-foot tall band (i.e., approximately 2350 sf) for the small studio B. If these areas are too costly for the budget, use as much area as possible. The cost would be lower using panels which have the fabric adhered to the fiberglass as opposed to stretched fabric panels.



Figure 2. Photo Showing Uneven Coverage of Sonex Panels

The remaining rooms of interest are Control A/B, Audio A/B, Linear Edit 025/026, Master Control, the 8 Edit rooms, Conference A/B, Executive Conference, and Executive Office. Each of these rooms has fully carpeted floors and a complete acoustical tile ceiling (although approximately 1/4 of the ceiling in Conference A and B is gypsum board). These finishes are fine without the need for acoustical wall panels for most room uses other than critical listening to speakers and use of teleconferencing systems.

We understand no audio recording will occur in Master Control, Control A/B or Audio A/B. As a result reverberation in these rooms is not as critical as in the studios (or presumably as in these existing



rooms when they were used by the prior owner BET). But there will presumably be some critical listening to speakers in these rooms. Therefore, we recommend using acoustical wall panels such as 1" thick fabric-faced fiberglass from the chair rail to the ceiling on all four walls (not counting wall areas hidden by built-in furniture.

Presumably, there will be teleconferencing systems in use for Conference A/B, Executive Conference, and Executive Office. In these rooms we recommend using the same 1" thick fabric-faced fiberglass acoustical wall treatment.

Since Conference A has a glass wall and a window wall, there are few locations available for acoustical wall panels. As such, we recommend using the same 1" thick fabric-faced fiberglass panels on the side of the operable wall facing Conference A (if this is too thick to be accommodated by the operable wall system, use 1/2" thick fabric-faced fiberglass instead).

If any of the other rooms listed above will have critical listening using speakers (not counting using only headphones) we would recommend the same 1" thick fabric-faced fiberglass treatment.

If you have any questions, please contact me at 703/534.2790 or Gary@HushAcoustics.com.

Sincerely,

Gary Ehrlich, P.E.

Fary Ehrlis.

Principal



September 20, 2011

Ms. Vivian Rey JVP Engineers, P.C. 5101 Wisconsin Ave, NW Suite 400 Washington DC 20016

Re: Office of Cable Television Relocation to 1899 9th Street, NE Site Noise; Acoustical Privacy Addendum

Ms. Rey:

Hush Acoustics LLC has completed an acoustical review for the Office of Cable Television Relocation project in Washington, D.C. This report addresses site noise, and also provides additional information about acoustical privacy per our second site visit today. Prior reports addressed acoustical privacy and room acoustics. A subsequent report will address noise from MEP systems.

Acoustical Privacy Addendum Issues

Tech/Core 024 and Linear Edit 025 will have noisy equipment in them. To control noise reaching surrounding areas we recommend sealing off the under-floor plenums of three sides of each of these rooms (including the wall between these two rooms) but not including the wall along corridor 003B since that corridor does not have a raised floor. We recommend using 2x4 frames under the raised floor (centered on walls above) with 1/4" thick mass-loaded vinyl on each side of the 2x4s with 3-1/2" batt insulation between the 2x4s. Attach the vinyl to the studs with screws. As noted in our prior report, for the four trenches / walker ducts which connect the raised floor area to the studios, audio rooms, and control rooms, pack fiberglass batt insulation to fill up this area for 3-foot long stretches in each room where the trenches end. Here are two vendors of mass-loaded vinyl; it is not necessary to use the optional insulated facings:

- http://www.proaudioacoustics.com/soundproofing_products/vinyl-commercial.htm
- http://www.noisecontrolproducts.com/Noise_Control_Flexible_Barrier_by_ArtUSA.html

We took a closer look at the existing steel IAC doors and noted they are 2-1/2" thick and have double rows of magnetic seals. This means they were rated at STC 49, 51, or 53 (most likely STC 51) when new [previously we thought they were the STC 47 model.] IAC also has a quick-ship program for their STC 51 doors. As a result, we recommend using the IAC STC 51 Noise Lock door wherever steel doors are replaced.

The existing wood doors are all 1-3/4" thick. Previously, we had recommended using 2-1/2" thick doors for all new wood doors. Since the existing doors are all 1-3/4" thick, it is fine to match the same 1-3/4" thickness for all new wood doors to reduce costs.



While on site today we noted that the vertical chases connecting the floor penetrations with the roughly ten-foot high cable trays in the two studios are steel and not gypsum board and wood as we previously had thought. As a result, disregard our prior recommendation to add gypsum board over these chases.

We confirmed that the walls of corridor 009, mechanical 042, and electrical 044 are full-height, which is good. We also confirmed that the doors to rooms 042 and 044 have solid-core doors without louvers; these should be fine once acoustical seals are added.

We identified additional penetrations of the studio walls at rooms 042, 043, and 044. Be sure to seal all penetrations including at pipes, ducts, and conduit.

We confirmed that audio A/B and control A/B have internally sound-lined return air transfer ducts leading to the corridor, which is good.

We confirmed that the walls along corridors 003A and 003B go to the structure above in the linear edit suites and tech core. However, the walls of master control, as well as the walls between each of these rooms (i.e., master control, linear edit 025/026, and tech core) do not go to the structure. We recommend extending all walls in this area to the structure above and adding internally sound-lined return air transfer ducts with at least two 90-degree elbows where return air is needed.

The walls of the elevator machine room go to the structure above and are fine. The door to this room appears fine, but it should receive new acoustical seals.

The columns on the ground floor appear to all be enclosed in gypsum board. As such, the detail where walls meet columns is not a problem. However, there are gaps where window mullions meet columns. Even though this joint is hard to reach, we still recommend adding acoustical sealant along all joints where mullions meet walls dividing two rooms (as discussed in our prior report).

Site Noise

Sound level meters were installed on site in two locations. One was in the basement loading dock parking area along the fence beside the outdoor stairs. For this meter the microphone was approximately 8 feet above the ground on top of a fence post. This meter was programmed to report the maximum, minimum, and average A-weighted sound levels, as well as the average, maximum, and minimum sound level in each octave band and one-third and octave band, each minute. In addition, this meter was programmed to record audio files each time the sound level exceeded 85 dBA. In this way, we could identify the causes of high sound levels and the meter would log the exact time the loud noise event occurred. This meter ran from 3 pm on Friday September 16, through 1:30 pm on Tuesday September 20, 2011. During the four days of data, the sound level exceeded 85 dBA nineteen times. The noise sources were train horns, train brakes, train cars clanking into each other, accelerating cars/trucks, and a bird in one case.

The other meter was in the middle of small studio B with the microphone on a tripod approximately 5 feet above the floor. Sounds levels were not measured in the large studio A since that studio has poor door seals. Sound levels in studio B are being taken as representative of both studios. This meter was



programmed to report the maximum, minimum, and average A-weighted sound level, as well as the average, maximum, and minimum sound level in each octave band and one-third and octave band, <u>each second</u>. From these data the maximum Noise Criterion (NC) ratings were calculated for each minute. The NC rating is a common way of describing HVAC system sound levels. This meter ran from 3 pm on Friday September 16, through 3 pm on Sunday September 18, 2011. After collecting two days of data, this sound level meter's memory was full (since it was collecting data each second).

Figure 1 presents the maximum A-weighted sound levels each minute in small studio B, and Figure 2 presents the maximum NC rating each minute in small studio B.

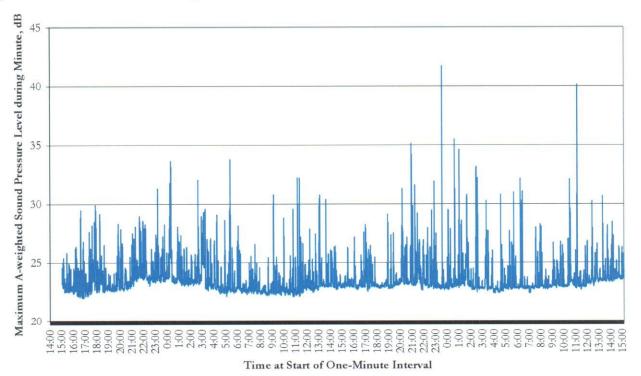


Figure 1. Maximum A-weighted Sound Levels in Small Studio B

There is no universally-used goal for site noise reception indoors. However, one reasonable goal is NC 20. During the two days of data indoors (2,888 minutes), the rating exceeded NC 20 at least one second during 22 one-minute intervals, and exceeded NC 21 at least one second during 8 one-minute intervals. This shows that site noise exceeds the goal relatively infrequently.

Sound is certainly not entering the studios through the walls. It is likely that the main sound transmission path is the roof. It is also possible that sound is entering through exterior windows and doors into corridors and then through the studio doors. If it were desired to reduce sound levels, it likely would be necessary to install a noise control ceiling such as gypsum board held 8 to 12 inches or more below the roof. [If the doors happen to be the weakest link, changing the door seals would also help.] Installing such a noise control ceiling likely is not warranted given the measured noise levels.



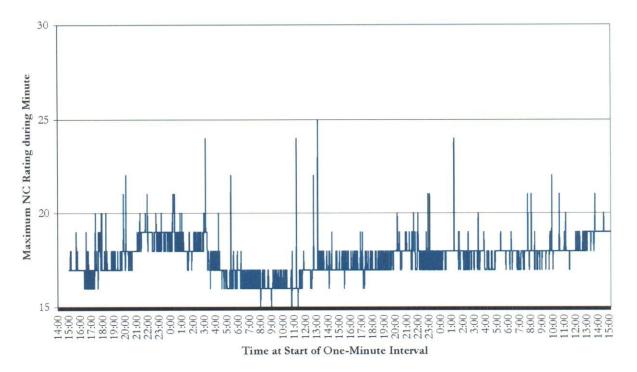


Figure 2. Maximum NC Ratings in Small Studio B

If you have any questions, please contact me at 703/534.2790 or Gary@HushAcoustics.com.

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